

ANNOTATED CATALOGUE OF CALIFORNIA
TERTIARY PALEOBOTANICAL TYPES
TRANSFERRED TO UNIVERSITY OF CALIFORNIA
MUSEUM OF PALEONTOLOGY

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Abstract. — Most paleobotanical holdings of the Natural History Museum of Los Angeles County were transferred to the University of California Museum of Paleontology, Berkeley, in February 1990. They included 41 type, figured, or referred specimens representing 21 species of Miocene marine algae described by N. L. Gardner or by B. C. Parker and E. Y. Dawson, and seven species of Pliocene and Miocene coniferous and deciduous trees and shrubs described by D. I. Axelrod or by B. C. Templeton. Four additional type specimens could not be located and are presumed to be lost.

Most paleobotanical holdings of the Natural History Museum of Los Angeles County, Los Angeles, California (LACMNH) were transferred to the Museum of Paleontology, University of California, Berkeley, California (UCMP) in February, 1990. This relatively small collection contained 41 type, figured, or referred specimens representing 21 species of Miocene marine algae described by Gardner (1923 [1924]) or Parker & Dawson (1965) and seven species of Pliocene and Miocene coniferous and deciduous trees and shrubs described by Axelrod (1937) or by Templeton (1953). Four specimens, representing three species described by Axelrod (1937), could not be located and are presumed to be lost. Four species, three represented only by single specimens, are type species for the form genera *Julescraneia*, *Paleopikea*, *Paleosiphonia*, and *Paleothamnion* (Parker & Dawson 1965).

Not included in the transfer are the paleobotanical specimens from the upper Pleistocene asphalt deposits of Rancho La Brea, including unpublished types of Templeton (1964) that are currently housed in the George C. Page Museum of La Brea Discoveries, a satellite facility of LACMNH. Also not included is the large collection of

Oligocene plants from Rott, Germany assembled by the late Georg Statz and described in a series of papers by Hermann Weyland.

Because paleobotany was never a formally recognized discipline at LACMNH, specimens have been variously labeled, and published under, one or more of the following administrative, departmental, or institutional numbering systems: Registrar loan and specimen number, Registrar Accession number, Vertebrate Paleontology specimen number (subsequently used as basis for Paleobotany catalogue series), Vertebrate Paleontology locality number, Paleobotany (PB-) catalogue number, and California Institute of Technology (CIT) Vertebrate Paleontology locality or specimen number. The catalogue series for all published numbers are identified in the following list.

Specimens cited are grouped together by division (Chlorophyta, Phaeophyta, Rhodophyta, Coniferophyta, and Magnoliophyta) and within each division are arranged alphabetically by genus and species name as originally published. Each entry includes a bibliographic reference, LACMNH type category and number as originally published (with explanations thereof), UCMP

Paleobotany type number, and remarks when needed. All inquiries concerning the examination or use of specimens should be addressed to the Museum of Paleontology, University of California, Berkeley, California 94720.

Chlorophyta

Caulerpites denticulata Parker & Dawson, 1965:276, pls. 76, 81 (fig. 5).

Holotype: "Type: LACM No. PB-1523 from site 1267." [LACMNH Paleobotany cat. no. PB-1523, Vertebrate Paleontology loc. 1267.]

=UCMP Paleobot. 10,859.

Phaeophyta

Cystoseira occidentalis Gardner, 1923 [1924]:363, unnumbered text-fig.

Holotype: [Not stated, but obviously the specimen on which the text figure is based, which is LACMNH Registrar Accession no. A.1011.]

=UCMP Paleobot. 10,860.

Remarks: The holotype was not located by Parker & Dawson (1965:283) and remained unrecognized until preparation of this catalogue. See also *Palaeohalidrys occidentalis* (Gardner) Parker & Dawson (1965).

Cystoseirites ornata Parker & Dawson, 1965: 284, pls. 80 (fig. 6), 86 (figs. 1, 2).

Holotype: "Type: LACM No. PB-1533 [pl. 80, fig. 6; pl. 86, fig. 1] from site 388." [LACMNH Paleobotany cat. no. PB-1533; CIT Vertebrate Paleontology loc. 388.]

=UCMP Paleobot. 10,861.

Paratype: "A second specimen, LACM No. PB-1534 [part (pl. 86, fig. 2) and partial counterpart] from site 388." [LACMNH Paleobotany cat. no. PB-1534; CIT Vertebrate Paleontology loc. 388.]

=UCMP Paleobot. 10,862.

Julescraneia grandicornis Parker & Dawson, 1965:278, pls. 77, 80 (fig. 3).

Holotype: "Type: LACM No. PB-1524 [pl. 77; pl. 80, fig. 3 (sketched reconstruction)] from site 1267." [LACMNH Paleobotany cat. no. PB-1524, Vertebrate Paleontology loc. 1267.]

=UCMP Paleobot. 10,863.

Referred specimen: "Impression of a brown-algal blade (PB-1546) which may represent a fragment of the blade of *Julescraneia*." [LACMNH Paleobotany cat. no. PB-1546, Vertebrate Paleontology loc. 1267.]

=UCMP Paleobot. 10,864.

Remarks: Type species of the form genus *Julescraneia* Parker & Dawson, 1965.

Palaeohalidrys californica Gardner, 1923 [1924]:362, pl. 25.

Figured specimen (Parker & Dawson 1965:280, pls. 78, 80 (figs. 4, 5)): "LACM No. PB-350 [pl. 78] from site 350." [LACMNH Paleobotany cat. no. 350, Registrar Accession no. A.5238.]

=UCMP Paleobot. 10,871.

Remarks: The spelling for the genus as originally proposed is *Palaeohalidrys* Gardner, 1924, which is correct and must be maintained. It is difficult to ascertain if the line drawings (pl. 80, figs. 4, 5) are accurate representations of PB-350 or are stylized reconstructions.

Palaeohalidrys dendritica Parker & Dawson, 1965:281, pl. 79, fig. 1.

Holotype: "Type: LACM No. PB-1525 [fig. 1] from site 317." [LACMNH Paleobotany cat. no. PB-1525; CIT Vertebrate Paleontology loc. 317.]

=UCMP Paleobot. 10,872.

Palaeohalidrys liguliformis Parker & Dawson, 1965:282, pl. 82.

Holotype: "Type: LACM No. PB-1527 [pl. 82]." [LACMNH Paleobotany cat. no.

PB-1527; institutional locality number not assigned.]

=UCMP Paleobot. 10,873.

Paratype: "Another specimen, LACM No. PB-1528 [unfigured] from loc. 1894A." [LACMNH Paleobotany cat. no. PB-1528, Vertebrate Paleontology loc. 1894A.]

=UCMP Paleobot. 10,874.

Paratype: "Yet another specimen, PB-1540 [unfigured] from site 1267." [LACMNH Paleobotany cat. no. PB-1540, Vertebrate Paleontology loc. 1267.]

=UCMP Paleobot. 10,875 [PB-1540(?)].

Remarks: An unnumbered specimen that may be PB-1540 is in the collection, but was disassociated from the correct labels.

Palaeohalidrys linearis Parker & Dawson, 1965:281, pl. 93, upper and lower figs.

Holotype: "Type: LACM No. PB-1526 [consisting of three blocks, the largest (lower fig.) and a smaller contiguous one, and the counterpart (upper fig.) to the smaller piece] from site 317." [LACMNH Paleobotany cat. no. PB-1526; CIT Vertebrate Paleontology loc. 317.]

=UCMP Paleobot. 10,876.

Palaeohalidrys occidentalis (Gardner) Parker & Dawson, 1965:283, pls. 84, 91, 92 (fig. 2).

Figured specimens: "LACM No. PB-1529 [part (pl. 84, lower fig.) and partial counterpart] from site 1806, LACM No. PB-1530 [5 contiguous pieces (pl. 84, upper fig.; pl. 92, fig. 2) and counterpart to basal piece] from site 317A, and LACM No. PB-1532 [pl. 91] from unknown site." [LACMNH Paleobotany cat. nos. PB-1529, PB-1530, and PB-1532, Vertebrate Paleontology loc. 1806; CIT Vertebrate Paleontology loc. 317A.]

=UCMP Paleobot. 10,877 [PB-1529], 10,878 [PB-1530], 10,880 [PB-1532].

Referred specimen: "LACM No. PB-1531 [an unnumbered specimen not associated with any labels may be PB-1531] from site

1925." [LACMNH Paleobotany cat. no. PB-1531, Vertebrate Paleontology loc. 1925.]

=UCMP 10,879 [PB-1531(?)].

Palaeohalidrys superba Parker & Dawson, 1965:284, pls. 80 (fig. 7), 85.

Holotype: "Type: LACM No. PB-395 [figures] from site 317." [LACMNH Paleobotany cat. no. PB-395; CIT Vertebrate Paleontology loc. 317.]

=UCMP Paleobot. 10,881.

Remarks: Plate 85 is a negative print of the specimen.

Paleocystophora acuminata Parker & Dawson, 1965:285, pl. 87.

Holotype: "Type: LACM No. PB-1535 [pl. 87] from site 1267." [LACMNH Paleobotany cat. no. PB-1535, Vertebrate Paleontology loc. 1267.]

=UCMP Paleobot. 10,865.

Paratype: "A second specimen from the same site, LACM No. PB-1536 [unfigured]." [LACMNH Paleobotany cat. no. PB-1536, Vertebrate Paleontology loc. 1267.]

=UCMP Paleobot. 10,866.

Paleocystophora delicatula Parker & Dawson, 1965:286, pl. 79, fig. 2.

Holotype: "Type: LACM No. PB-1537 [part (fig. 2) and counterpart] from site 1925." [LACMNH Paleobotany cat. no. PB-1537, Vertebrate Paleontology loc. 1925.]

=UCMP Paleobot. 10,867.

Paleocystophora lacerodentata Parker & Dawson, 1965:286, pl. 88.

Holotype: "Type: LACM No. PB-1538 [part (pl. 88) and counterpart] from site 1879." [LACMNH Paleobotany cat. no. PB-1538, Vertebrate Paleontology loc. 1879.]

=UCMP Paleobot. 10,868.

Paleocystophora plumosa Parker & Dawson, 1965:286, pls. 81 (fig. 2), 89.

Holotype: "Type: LACM No. PB-1539 [figures] from site 1267." [LACMNH Pa-

leobotany cat. no. PB-1539, Vertebrate Paleontology loc. 1267.]

=UCMP Paleobot. 10,869.

Paleocystophora subopposita Parker & Dawson, 1965:287, pl. 90.

Holotype: "Type: LACM No. PB-365 [pl. 90] from site 365." [LACMNH Paleobotany cat. no. PB-365.]

=UCMP Paleobot. 10,870.

Rhodophyta

Chondrides flexilis Parker & Dawson, 1965: 289, pls. 92 (fig. 1), 95.

Holotype: "Type: LACM No. PB-1235 [figures] from site 1040." [LACMNH Paleobotany cat. no. PB-1235, Vertebrate Paleontology loc. 1040.]

=UCMP Paleobot. 10,882.

Chondrides ramulosa Parker & Dawson, 1965:291, pl. 96, fig. 1.

Holotype: "Type: LACM No. PB-1545 [fig. 1] from site EDM-4." [LACMNH Paleobotany cat. no. PB-1545; E. D. Mitchell locality 4.]

=UCMP Paleobot. 10,883.

Chondrides recurva Parker & Dawson, 1965: 289, pls. 81 (fig. 6), 94 (fig. 2).

Holotype: "Type: LACM No. PB-1542 [2 branches ("specimens"), part (figs. 6, 2) and counterpart], probably from site 317." [LACMNH Paleobotany cat. no. PB-1542; CIT Vertebrate Paleontology loc. 317 (?).]

=UCMP Paleobot. 10,884.

Delessertes acuminata Parker & Dawson, 1965:290, pl. 92, figs. 3-5.

Holotype: "Type: LACM No. PB-1544." [LACMNH Paleobotany cat. no. PB-1544.]

=UCMP Paleobot. 10,885.

Remarks: Figures 3-5 are "reconstructions from the type materials of *Delessertes acuminata*."

Paleopikea cranei Parker & Dawson, 1965: 288, pls. 81 (fig. 4), 96 (fig. 2).

Holotype: "Type: LACM No. PB-1541 [figs. 4, 2] from site 1925." [LACMNH Paleobotany cat. no. PB-1541, Vertebrate Paleontology loc. 1925.]

=UCMP Paleobot. 10,886.

Remarks: Type species of the form genus *Paleopikea* Parker & Dawson, 1965.

Paleosiphonia oppositoclada Parker & Dawson, 1965:288, pls. 81 (fig. 3), 94 (fig. 1).

Holotype: "Type: LACM 10,202 [part (figs. 3, 1) and counterpart]." [LACMNH Paleobotany cat. no. PB-2990; CIT Vertebrate Paleontology loc. 387B.]

=UCMP Paleobot. 10,887.

Remarks: The specimen number "LACM 10,202" cited in Parker & Dawson (1965: 288) is a CIT Vertebrate Paleontology specimen number for *Bathylagus angelensis*, one of two fish on the block of diatomite with *P. oppositoclada*. This is the type species of the form genus *Paleosiphonia* Parker & Dawson, 1965.

Paleothamnion acicularis Parker & Dawson, 1965:290, pl. 96, fig. 3.

Holotype: "Type: LACM No. PB-1543 [fig. 3] from site 1925." [LACMNH Paleobotany cat. no. PB-1543, Vertebrate Paleontology loc. 1925.]

=UCMP Paleobot. 10,888.

Remarks: Type species of the form genus *Paleothamnion* Parker & Dawson, 1965.

Coniferophyta

Pinus hazeni Axelrod, 1937:165, pl. 2, fig. 4.

Paratype: "¹⁰¹⁴/₇₁₉ [unfigured]." [LACMNH Paleobotany cat. no. PB-719, Vertebrate paleontology loc. 1014 (sublocality 1).]

=UCMP Paleobot. 10,889.

Remarks: The holotype and only other original specimen is UCMP Paleobot. 958 (fig. 4). Two additional specimens subsequently figured by Axelrod (1986:625, figs. 75, 76) are cited erroneously as paratypes, but were not part of the original material studied by Axelrod (1937).

Pinus lawsoniana Axelrod, 1967.

See Remarks under *Pinus pretuberculata* Axelrod, 1937.

Pinus paucisquamosa Templeton, 1953:64, pl. 11, figs. 1, 2, 3b.

Holotype: "Type, Paleobotany No. 1400 [fig. 1]," and "4432/PB-1400." [LACMNH Paleobotany cat. no. PB-1400, Registrar Accession no. A.4432.]

=UCMP Paleobot. 10,890.

Remarks: Templeton (1953:figs. 2, 3b) as well as Axelrod (1986:fig. 46) also figured latex(?) casts made from the holotype mold.

Pinus pretuberculata Axelrod, 1937:166, pl. 3, figs. 3, 4.

Syntypes: "Cotypes, L. $\frac{1306}{1014}$ [fig. 3; missing], $\frac{688}{1014}$ [fig. 4; missing]." [LACMNH

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Registrar Loan no. L.1306, Vertebrate Paleontology loc. 1014 (sublocalities 1 [PB-696] and 3 [PB-688]), Paleobotany cat. nos. PB-688 and PB-696.]

=UCMP Paleobot. 10,891 [PB-688; missing], 10,892 [PB-696; missing]; UCMP numbers assigned in absentia.

Remarks: *Pinus pretuberculata* was described on the basis of two specimens, both of which are missing and presumed lost. Specimen 688 (=PB-688) belonged to Mr. D. G. Wolfskill of Beaumont, California, and was on loan to LACMNH when it was in turn loaned to R. W. Chaney (UCMP) in 1933. The specimen was returned to the Museum in 1936, and appears to have been returned to its owner. A search of the Mu-

seum Registrar's records failed to uncover any paperwork that would suggest that the Museum ever acquired this specimen. Axelrod (1967:115–116) has since referred this specimen to *P. lawsoniana* Axelrod, 1967.

Specimen 696 (=PB-696) was also returned to the Museum in 1936 and was one of several of Axelrod's (1937) type specimens from the Mount Eden flora that were placed on exhibit in 1947. An original label for PB-696 was found among the specimens that had been taken off display, but it was not associated with the figured syntype. A search for the specimen was made, but it could not be located and is presumed to be lost. This specimen was cited as the "holotype" by Axelrod (1967:124), and subsequently designated as the lectotype (Axelrod 1986:631).

Pseudotsuga macrocarpa Axelrod, 1937: 167, pl. 3, figs. 1, 2.

Syntypes: "Cotypes, L. $\frac{1313}{6}$ [unfigured],

$\frac{1014}{749}$ [unfigured]." [LACMNH Registrar

Loan no. L.1313 (specimen 6), Vertebrate Paleontology loc. 1014 (sublocality 6a), Paleobotany cat. no. PB-749.]

=UCMP Paleobot. 10,893 [L.1313/6], 10,894 [PB-749].

Remarks: The remaining three syntypes are UCMP Paleobot. 962 (fig. 2), 963 (fig. 1), and 964.

Magnoliophyta

Juglans beaumontii Axelrod, 1937:171, pl. 4, figs. 11, 12.

Syntypes: "Cotypes, L. $\frac{1313}{103}$ [unfigured],

L. $\frac{1313}{127}$ [unfigured], $\frac{1014}{1}$ [fig. 12; missing]." [LACMNH Registrar Loan no. L.1313

(specimens 103 & 127), Vertebrate Paleontology loc. 1014 (sublocality 1).]

=UCMP Paleobot. 10,895 [L.1313/103],

10,896 [L.1313/127], 10,897 [1014/1; missing, UCMP number assigned in absentia].

Remarks: The original label for specimen 1014/1 is present, but was not associated with the figured syntype, which is missing. The remaining syntypes are UCMP Paleobot. 971 (fig. 11) and 972.

Prunus preandersonii Axelrod, 1937:176, pl. 4, figs. 9, 10.

Syntypes: "Cotypes, $\frac{L.1313}{94}$ [fig. 9],

$\frac{L.1313}{100}$ [fig. 10], $\frac{L.1313}{112}$ [unfigured]." [LAC-

MNH Registrar Loan no. L.1313 (specimens 94, 100, & 112).]

=UCMP Paleobot. 10,898 [L.1313/94], 10,899 [L.1313/100], 10,900 [L.1313/112].

Prunus prefremontii Axelrod, 1937:176, pl. 4, figs. 5, 6.

Syntypes: "Cotypes, $\frac{1014}{822}$ and $\frac{L.1014}{822}$

[fig. 5], $\frac{1014}{909}$ [unfigured, missing], $\frac{1014}{912}$ and

$\frac{L.1014}{912}$ [fig. 6]." [LACMNH Vertebrate

Paleontology loc. 1014 (and sublocality 1 [PB-822]), Paleobotany cat. nos. PB-822, PB-909, and PB-912.]

=UCMP Paleobot. 10,901 [PB-822], 10,902 [PB-909; missing, UCMP number assigned in absentia], 10,903 [PB-912].

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